

Happiness and Wellbeing for Sustainable Development

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Abstract

Personal well-being and happiness have been the focus of human concerns for decades. Bring intentional changes to sustain personal well-being in lives of people requires an understating of the multifaceted interacting formal, non formal, and informal institutional factors that influence human behavior. It has been considered as a founding stone of evolution of the great religions as well as inestimable local traditions and spiritual “pathways”. The search of happiness is debatably the definitive motivating force of each and every action accomplished by individuals, either at individual or communities and national levels. Unfortunately we have not yet understood the meaning of happiness and its relationship to well-being, which is the ultimate force that may direct the path of happiness and sustainable behavior. Sustainable behavior satisfies our needs today, without diminishing the prospects of future generations to do the same. Which behaviors are the most damaging? Why don't we behave more sustainably, and what is the best approach to change? Presently there is no agreement on the nature of personal well-being and sustainable behavior; and almost all the proposed models have elements of subjectivity. Researchers have developed a novel collective ecosystem approach for constructing a basic health representation that may maintain strength across social, economical, environmental and cultural domains of societies to promote personal well-being. The collective ecosystem approach seems to be consistent with traditional values and provides a basis for personal conduct that may address the need to meet the century's major cultural and ecological challenges. The assumption is to be easily concerned with the natural and modified ecosystems. To arrive at a state of complete physical, mental, and social well-being, an individual must hold across main dimensions of human well-being such as physical, intellectual, social, emotional, and spiritual attributes. With the help of these attributes, scientists working directly on solving the problems pertaining to the ecosystem may utilize psychological findings that may be helpful in shaping environmental programs. Application of these attributes maintaining the well-being of individuals and community is described and the implications are discussed.

Introduction

The present century appears exceptional in the history of mankind. Tremendous changes

have taken place; the transformations which belong to people's efforts may be controlled to some extent and some which are beyond their control raise challenges towards their ability to adapt to the social situations and environment. Social transformations, technological development, environment changes have created massive challenges in front of the people. In spite of all these transformations and developments, human beings keep on continuing with their pursuit for happiness. It becomes essential for human beings to be prepared for the new century's transformations. They are faced with the quarries regarding behaving and maintaining their values in order to sustain their personal well-being in this new changing social situations. It becomes essential for human beings to search the answer of such questions and necessarily reconsider how they shift their lives in the search for contentment in the new situations of transformation.

Personal well-being

Researches on personal well-being start from the thought of happiness. Happiness and well-being refer to both positive feelings such as joy or serenity, and to positive states such as those involving flow or absorption. While there appears to be conformity that the wish to attain happiness is the innermost driver of human subsistence, there is no real consensus about its definition and measurement. In the broadest sense, it equates to well-being or quality of life. However, it is useful to bring out more specific meanings of personal well-being.

Veenhoven (2006) differentiated between factors which relate to the potential for a good life (life chances), and the actual outcomes of life (life results), and also between factors that are internal and those that are external. This led to four qualities of life such as Livability of environment, Life-ability of the person (well-being, or health), utility of life and Life satisfaction, all of which denote to happiness. Veenhoven's Livability of environment relates to the well-being of the individual's total life context– the external circumstances that determine opportunities for happiness. Life-ability of the person, on the other hand, includes factors that determine how well we respond to life's problems and opportunities, and is broadly similar to the concept of personal health or well-being, which tends to be the focus of therapists and educators. In the domain of outcomes, Utility of life describes the extent that an individual's life contributes to some higher value, while life satisfaction describes the subjective appreciation of life. Life satisfaction is commonly referred to as subjective well-being, or simply as happiness.

Personal well-being may be equated with life-ability, happiness and life satisfaction. How to determine this inner subjective life satisfaction or happiness is not clear, and depends on whether to consider short or long term satisfaction, satisfaction with life as a whole, or satisfaction with part of life. Veenhoven (2006) preferred to conceptualize life-satisfaction

as an enduring satisfaction with one's whole life. People come within reach of evaluation in various ways. An affective evaluation is an overall assessment or weighing up of the pleasures and pains of one's life. A cognitive evaluation is a more objective and deliberate assessment of satisfaction with one's condition and achievements in relation to driving aspirations. As a final point, an attitudinal estimate emphasizes the effect of life's experiences on one's current overall disposition. As a result of all these different ways that happiness can be measured, or appreciated, it is hard to say *why people* are happy and what actions will make people happy. That is, we are not clear on the basis of personal well-being. To complicate matters, happiness, or inner life satisfaction, is taken to be the gold standard of personal well-being – the “proof of the pudding”. Because it is mostly assessed in a rather shallow, emotional way, we often make the wrong choices in life, and events turn out not to deliver the happiness we expected. These confused signals, then, affect our ability to learn, and be clear on how we should manage ourselves to achieve life-satisfaction (Gilbert, 2006).

Attaining happiness with the help of Personal well-being

Taylor and Brown (1988) examined contrasting perspectives on well-being and happiness between those whose focal point is on psychological disorders, and those whose focus is maximizing well-being. Findings of treatment of disorders have concluded that one of the most important indicators of mental health is the ability to perceive reality accurately. In contrast, well-being studies have found that holding illusions can promote well-being in important ways. These illusions are more substantial than an error or bias in perception. They are “an enduring pattern of error or bias, or both, that assumes a particular direction or shape” (Taylor et al., 1988).

These illusions may lead themselves in three major modes of behavior. People may have idealistically positive views of themselves, they may believe that they have more control over our environments than they actually have, or they may be idealistically hopeful about the outlook. Studies indicate that individuals with more balanced views have often been found to have low self-esteem, or to be moderately depressed. On the other hand, optimism tends to be a feature of the outlook of most (“well”) people, and contributes to their ability to directly experience happiness and contentment– which in turn affects social bonding, social functioning, and ability to care for others. It also affects our ability to be creative and do productive work. Here, illusions can boost creative thinking, motivation and performance. To help sustain these illusions, people also tend to be skillful at using various tactics and strategies – such as avoiding challenging situations - that “immunize” themselves psychologically from negative feedback that might diminish their well-being, but allow more accurate perception of reality. Psychologists also affirm the power of “intentional activity”, such as setting goals and achieving them, as a means for enhancing well-being (McGregor & Little 1998).

Similarly, Buddhism believes happiness is a skill that can be learned: happiness derives from altruistic, compassionate behavior, whether motivated by social pressures, or by personal empathy, with altruistic love being the most powerful (Ricard 2006). Ultimately, however, “true” happiness is seen by Buddhists as a state of being, unrelated to any particular activity. This state of being is believed to require a transformation of mind. Achieving this transformation is a protracted process facilitated by exposure to and responding to human suffering of all kinds, meditation, saturating the mind with “loving-kindness”, and consciously managing thoughts and emotions. Above all, Buddhists suggest, happiness requires us to free ourselves from aspirations related to wealth and personal standing. When we achieve a state of true happiness, we possess an inner radiant joy through which we are able to bring about change in people we interact with (Ricard, 2006). In like stratum, Christians emphasize compassionate love, forgiveness, and the importance of consciously seeking out and encouraging the good in others, and refraining from the pursuit of material wealth. Parallel themes affect the world's major religions (Sharma 1993).

Ancient Indian thought is a storehouse of rich psychological insights elucidating explicit and subtle fine distinctions of processes and constructs such as personal well-being and mental health, cognition, emotion, attention, motivation, perception, self and personality, psychopathology and its management (Kuppuswamy, 1985). Ancient Indian physician and scholar Charaka have emphasized on the effects of personal well-being on people's life. Personal well-being enables an individual to learn about mechanisms required for leading an ideal life (Dasgupta, 1941). Upanishads distinguished between the self as an ultimate entity and self as empirical ego. Whereas the ego engages itself in worldly affairs and experiences pleasure as well as pain, the 'atman' or ultimate entity is devoid of pain or pleasure, it is an onlooker devoid of senses, surpassing time, space, and causality and it is the true self and ultimate reality. This reality cannot be perceived or known by our mind as it is different from phenomenal reality and it can only be realized through meditation (Radhakrishnan, 1953). In order to terminate suffering, one must awake the higher dimensions of personal well-being and let it triumph over the lower one.

Twentieth-century Indian philosopher and spiritualist Sri Aurobindo based on his experiences and thorough study of ancient Indian philosophy constructed an evolutionary map of consciousness. He believed that consciousness is the fundamental thing in the universe and it manifests itself as matter, different objects and beings. It is erroneous to identify consciousness with mind as there are ranges of consciousness above and below the human range, of which the normal human being is naive. The purpose of life and over several lifetimes is to lift this veil of ignorance and pervade the inner recesses of spiritual kingdoms after which our external being, mind or ego will occur to us as small and superficial. The path of spiritual attainment according to Sri Aurobindo need not be a renunciation of the world and a leap into Samadhi but it should be a patient transit beyond

mind into truth-consciousness where the infinite can be known, felt, seen, and experienced to its fullest (Dalal, 2001). Sri Aurobindo believed that traditional method of attainment of well-being, where the individual cut himself from the world, was flawed as the individual lost the insights of higher consciousness as soon as he came back to ordinary worldly consciousness. True liberation is not a flight from the material world into a spiritual world but is possible only by a unification of two ends of existence, the spiritual summit and the material base.

In traditional Indian scriptures, personal well-being is defined as “happiness of senses and mind” (*prasnendriya manah swasthyam*). It has been indicated that optimal functioning of individuals can be ensured only when they remain in a state of happiness. In fact, all positive aspects of health are thought of emerging from happiness (*sukhmoolakam swasthyam*). The term “swasthya”, is made up of two words, namely “swa” (self) and “astha” (staying). In this sense, health means a state of staying within self. This also means that happiness cannot be achieved unless one turns inward and asks broader questions about himself. While an external orientation provides us with a number of standards of comparison, the internal orientation provides us with an opportunity of discovering our self, relate it to others, and search out the ways in which it could be put to best use. The unfortunate part of human beings is that they hardly turn inward to reflect on their self and its relationship with others. The external world contains all that provides us with sensuous pleasure. It is a different question whether we can manage to afford them or not (Mishra, 2009).

Behavioral models for personal well-being indicate a lack of a clear distinction between well-being and life-satisfaction. Jahoda (1958) identified assumptions for mental health – the ability to *be* happy; positive attitudes toward the self; the ability to grow, develop and self-actualize; autonomy; environmental mastery in work and social relationships; and integration. Similarly, Jourard and Landsman (1980) defined a positive self-regard as an ability to care about others and for the natural world, openness to new ideas and to people, creativity, the ability to do productive work, the ability to love, and realistic self-perceptions. Likewise, Ryff (1989) listed self-acceptance, positive relations with others, autonomy, environmental mastery, having a purpose in life, and personal growth. He noted that such lists were likely to be marked by a researcher's own values, and these interactions themselves deserved further examination.

Models for positive well-being explaining human behaviors collectively point out the significance of well-being. However, many of these behaviors are affected by inherited personality traits. Schmutte and Ryff (1997) found strong links between the “Big 5” personality measures (extraversion, neuroticism, openness to experience, agreeableness, and conscientiousness), and six conceptually different realms of psychological functioning used to assess personal well-being that are – positive appraisal of one's self and one's past

life (self acceptance), the capacity to effectively manage one's environment (environmental mastery), presence of high quality interpersonal ties (positive relations with others), the belief that one's life is purposeful and meaningful (purpose in life), a sense of continued growth and development of an individual (personal growth), and, a sense of self-determination (autonomy). Researchers have found findings for very strong genetic effect – up to 50 per cent or more – on levels of happiness, which would suggest there is moderate or limited room for managing one to maximize happiness, depending on the levels that one assumes. Life circumstances (such as age, gender, ethnicity, personal history, marital status, job security, income, health, and religious affiliation) account for 10 per cent of the total variation, and intentional activity, 40 per cent (Lyubomirsky, Sheldon & Schkade, 2005).

Regardless of a significant genetic effect, Lyubomirsky *et al* (2005) found four main reasons for believing that we can systematically improve our levels of happiness. Researchers have indicated benefits from consciously engaging in virtues such as gratitude, forgiveness, and thoughtful reflection. Motivational and attitudinal factors have been linked to well-being. These are factors that we can control, for instance by taking an optimistic outlook. Finally, genetic effects are often predicated on contextual factors, and some situations that reduce happiness can be avoided. In a study of how goal-directed activity influenced happiness levels, McGregor and Little (1998) found that traditional measures of happiness led to weight being placed on accomplishment as a source of shorter term happiness, whereas tasks that provided opportunity for individuals to be themselves, leading a life of integrity, or consistency, were potentially more important for long term well-being.

McGregor and Little cited Deci and Ryan (1991) on the significance of integrity: “organismic integration refers to the most basic developmental striving of the 'self', that is, toward coherence in one's regulatory activity and experience, and toward interacting in a coherent and meaningful way with others so as to experience satisfying relationships with individuals and a harmonious relationship to the larger social order”. McGregor and Little explained idea of consonance in terms of tasks that provided opportunities for adjoining eight elements of the self that could be manifested at different times and contexts. They found that the type of task that gave happiness to people depended on whether they were agentic (individualistic), communal (gravitating to group situations), or hedonistic (pleasure-seeking). Possibly contrary to expectations, greatest rewards were obtained when participants engaged in activities that were “inconsistent with their primary identity orientation”. Agentic people were happiest when their goals were supported by others, communal persons were happiest when their goals provided opportunities for fun, and hedonic persons were happiest when their goals were simply being accomplished. Examining the importance of goal accomplishment, these researchers found that “rigid persistence on one aspect of integrity might leave one unhappy because of decreased attunement to counter thematic efficacy opportunities”, and, further on, “if efficacy (i.e. goal

accomplishment) is not vacuous, and integrity is not rigid, both should be able to inspire a balanced and prudent plan system.”

To give weight to intentional activity in promoting happiness, Ryan and Deci (2000) highlighted the significance of individual competence, autonomy, and relatedness as necessary conditions for self-determination. Motivation taking place from autonomy resulted from deep, holistic reasoning, and was most effective in producing lasting changes in behavior. Autonomy is not completely valuable, however. Gilbert (2006) observed that much personal anxiety and unhappiness today resulted from inability to cope with the considerably increased amount of personal freedom of modern living, compared to older societies where decisions about where to live, what work to do, and who to share one's life with, were often made by someone else. Gilbert observed that it is perhaps not surprising that western democracy and capitalism do not always lead to real sense of liberation.

Application of Ecological systems approaches in Psychology

Ecological systems approaches have already established its relevance in the field of psychology. Near the beginning 1990s (e.g. Cooper & Upton 1991) “ecosystemic” or “ecological” approaches have led to perspectives in which a client or subject is considered to be at the centre of an interacting ecosystem of individuals and groups, all of whom needed to be careful as part of addressing their health and well-being. Chung and Pardeck (1997) used an ecosystem approach to structure social work practice for ethnic minorities in the USA, Newes-Adeyi *et al* (2000) used the approach to define formative research for a training programme, Brown and Kasser (2005) demonstrated synergies between psychological and ecological well-being, Maller *et al* (2005) recapitulated facts for direct impact of contacts with nature on human health and well-being, and Dishion and Stormshak (2007) described how an ecological approach led to a family-focused approach to mental health care. Focusing on the individual human being, White *et al* (2007) presented people as “adaptive behavioral systems” that performed life history tasks while operating within an overarching evolutionary framework.

The human being itself may be modeled as an ecosystem of pooling resources and assisting components, connecting organs, the various systems of the body, and their connecting and communication mechanisms. Yet the mind itself may be considered as such a complex as discussed by Lucas (2005) from an artificial intelligence perspective, Marvin Minsky in his *Society of Mind* (Minsky, 1988). Goertzel (2005) evaluated ideas of the mind as a complex system and supported efforts to see the mind itself as a whole, in which even thought itself could be viewed as emergent systems behavior from the core consciousness.

KiwiGrow offers a model for society and ecosystem health, or well-being, and for this cause

it has got importance to models for individuals' well-being. Its core thought encompasses of an individual that coexists in a mutually advantageous, harmonious approach of leading a life with its surroundings. Although such a concept might seem to be rather restrictive as a lens through which to view human behavior and wellbeing, it turns out that the model has quite substantial implications for how we might wish to model human well-being. First, it is helpful to review the origins and nature of the basic model. An ecosystem can be defined as 'a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit' (UNEP 1992). The earth's surface can therefore be visualized as a mosaic of ecosystems, nested within one another. Ecosystems, both natural and metaphorical, can range from small wetlands to cities, or entire landscapes (Pickett *et al* 2004), and sustainable development can be conceptualized as integrated management of this mosaic (United Nations 2004).

The 'ecosystem approach' to sustainable development spins around building understanding of the structures, processes, and interactions within the ecosystem, and adopting a management process that will deliver sustainability (e.g. Slocombe 1993). However, because collecting the necessary tools and competencies presents major challenges, progress in this direction has been mainly in the area of managing natural or 'green' areas, with an emphasis on maintaining or restoring natural ecological processes. The approach has been difficult to operationalise to the point where it can provide a basis for managing entire landscapes. These difficulties have motivated interest in the concept of ecosystem health, with the aim of developing a diagnostic and problem-solving approach analogous to that used to manage human health (Costanza, Norton & Haskell, 1992). Because a healthy ecosystem can be regarded as sustainable (Costanza & Mageau 1999), an ecosystem health model provides a means for operationalising the concept of sustainable development. However, it has proven difficult to establish models of ecosystem health that would apply to a range of natural or modified ecosystems, let alone the infinitely variable 'ecosystems' associated with human activities. These difficulties in producing a satisfactory generalized ecosystem health model largely stem from the problem of representing interacting human and natural ecosystems in a single model.

The KiwiGrow model is based on a different approach. Instead of seeking to conceptualize an entire complex system, involving anthropic and non-anthropic components, it is based on conceptualizing the entire system as alternately a social system, an economic system, an environmental-ecological system, and a cultural system (Checkland, 1981). Each of these systems is a complex, adaptive, evolving living system, and therefore able to be modeled, by itself, as an ecosystem. The KiwiGrow ecosystem health model was developed by constructing a generic health model that maintains validity within each of the four idealizations (social, economic, environmental and cultural) in turn (Luckman, 2006a, b).

The qualities of healthy sustainable ecosystems that are nurturing, supportive, stable, contributing, responsive, directed, and adaptive were identified most directly from analysis of work by Okey (1996) on the health of agro-ecosystems. That was aimed for a small number of systems qualities that could adequately capture the essential characteristics of a complex system that responds and adapts to change, maintains its stability and integrity, renews itself, and has healthy relationships with the external world. To make it genuine at the operational basis for sustainable development, these system qualities seem easy to understand and communicate, and descriptive of healthy behavior, rather than being contestable “fundamental determinants” of this behavior. It may capture the common-sense ideas about health, and clearly points to risks factors. It has to be practical to be equally healthy in social, economic, environmental and cultural contexts because healthy ecosystems are protected, restoring, and offer care for youth and susceptible.

References

Brown, K.W. and Kasser, T.: 2005, 'Are Psychological and Ecological Well-Being Compatible? The Role of Values, Mindfulness, and Lifestyle', *Social Indicators Research* 74, 349-368.

Checkland, P.: 1981, *Systems Thinking, Systems Practice* (Chichester: Wiley and Sons, Chichester).

Chung, W.S. and Pardeck, J.T.: 1997, 'Treating Powerless Minorities Through an Ecosystem Approach', *Adolescence* 32, 625-634.

Cooper, P. and Upton, G.: 1991, 'Controlling the Urge to Control: An Ecosystemic Approach to Problem Behavior in Schools', *Support for Learning* 6 (1), 22-26.

Costanza, R., Norton, B.G. and Haskell, B.D.: 1992, *Ecosystem Health – New Goals for Environmental Management* (Washington D.C.: Island Press).

Costanza, R. and Mageau, M.: 1999, 'What is a Healthy Ecosystem', *Aquatic Ecology* 33, 105-115.

Dalal, A. S.: 2001, *A Greater Psychology: An Introduction to the Psychological Thought of Sri Aurobindo* (Pondicherry: Sri Aurobindo International Centre of Education).

Dasgupta S. N.: 1941, *Philosophical Essays* (Calcutta: University of Calcutta Press).

Dishion, T.J. and Stormshak, E.A.: 2007, 'Ecological Assessment'. In Dishion, T.J. & Stormshak (eds.) *Intervening in Children's Lives: An Ecological, Family-Centered Approach to Mental Health Care* (Washington D.C.: U.S. Psychological Association), p. 319

Gilbert, D.: 2006, *Stumbling on Happiness* (London, New York: Harper).

Goertzel, B.: 2005, 'Levels of Mind versus Levels of Being', *Cortex* 41(5), 727-729.

- Jahoda, M.: 1958, Current Concepts of Positive Mental Health (New York: Basic Books).*
- Journard, S.M. and Landsman, T.: 1980, Healthy Personality: An Approach from the Viewpoint of Humanistic Psychology (4th ed.) (New York: MacMillan).*
- Kuppuswamy B.: 1985, Elements of Ancient Indian Psychology (New Delhi: Vani Educational Books).*
- Lucas, C.: 2005, 'Evolving an Integral Ecology of Mind', Cortex 41(5), 709-726.*
- Luckman, P.G.: 2005, 'A Community and Environmental Health Framework for Sustainable Development', Creative Decisions Ltd Background Paper.*
- Luckman, P.G.: 2006a, 'KiwiGrow™ - A Universal, Ecosystem-Based Framework for Sustainable Development', 12th Annual International Sustainable Development Research Conference, Hong Kong, 6-8 April, 2006.*
- Luckman, P.G.: 2006b, 'KiwiGrow™ - A Community and Environmental Health Framework for Sustainable Development'. In Mander U., Brebbia, C.A., & Tiezzi, E. (eds.) The Sustainable City IV – Urban Regeneration and Sustainability. Proceedings, Fourth International Conference on Urban Regeneration and Sustainability, Tallinn, Estonia, 155-167.*
- Lyubomirsky, S., Sheldon, K.M., and Schkade, D.: 2005, 'Pursuing Happiness: The Architecture of Sustainable Change', Review of General Psychology 9(2), 111-131.*
- McGregor, I. and Little, B. R.: 1998, 'Personal Projects, Happiness, and Meaning: On Doing Well and Being Yourself', Journal of Personality and Social Psychology 74(2), 494-512.*
- Maller, C., Townsend, M., Pryor, A., Brown, P., and St Leger, L.: 2005, 'Healthy Nature, Healthy People: 'Contact With Nature' as an Upstream Health Promotion Intervention for Populations', Health Promotion International 21(1), 45-54.*
- Minsky, M.: 1988, Society of Mind (Simon & Schuster).*
- Mishra, R. C.: 2009, 'Cultural Perspectives on Psychological Well-being', United Journal of Awadh Scholars 1, 1-13.*
- News-Adeyi, G., Helitzer, D.L., Caulfield, L.E., and Bronner, Y.: 2000, 'Theory and Practice: Applying the Ecological Model to Formative Research for a WIC Training Program in New York State', Health Education Research 15 (3), 283-291.*
- Okey, B.W.: 1996, 'Systems Approaches and Properties, and Agroecosystem Health', Journal of Environmental Management 48, 187-199.*
- Pew Research Center: 2006, 'Are We Happy Yet? Social Trends Report'. Online at <http://pewsocialtrends.org/assets/pdf/AreWeHappyYet.pdf>*

Pickett, S.T.A., Cadenasso, M.L., and Grove, J.M.: 2004, 'Resilient Cities: Meaning, Models, and Metaphor for Integrating the Ecological, Socio-Economic, and Planning Realms', *Landscape and Urban Planning* 69, 369-384.

Radhakrishnan S.: 1953, *The Principal Upanishads* (London: Allen and Unwin).

Ricard, M.: 2006, *Happiness. A Guide to Developing Life's Most Important Skill* (New York: Little, Brown & Co.).

Ryan, R.M. and Deci, E.L.: 2000, 'Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-being', *American Psychologist* 55(1), 68-78.

Ryff, C.: 1989, 'Happiness is everything, or is it? Explorations on the meaning of psychological well-being', *Journal of Personality and Social Psychology* 57(6), 1069-1081.

Schmutte, P.S. and Ryff, C.D.: 1997, 'Personality and Well-being: Re-examining Methods and Meanings', *Journal of Personality and Social Psychology* 73(3), 549-559.

Sharma, A.: 1993, *Our Religions* (San Francisco: Harper).

Slocombe, D.S.: 1993, 'Environmental Planning, Ecosystem Science, and Ecosystem Approaches for Integrating Environment and Development', *Environmental Management* 17(3), 278-303.

Taylor, S.E. and Brown, J.D.: 1988, 'Illusion and Well-being: A Social Psychological Perspective on Mental Health', *Psychological Bulletin* 103(2), 193-210.

UNEP: 1992, *Ecosystem Approach – Description*. Convention on Biological Diversity, United Nations Environment Programme. Online at <http://www.biodiv.org/programmes/crosscutting/ecosystem/description.asp>.

United Nations: 2004, *Millennium Ecosystem Assessment*. Online at <http://www.millenniumassessment.org/en/index.aspx>.

Veenhoven, R.: 2006, 'How Do We Assess How Happy We Are? Tenets, Implications and Tenability of Three Theories'. Paper presented at conference on "New directions in the Study of Happiness. United States and International Perspectives. University of Notre Dame, USA, October 22-24, 2006.

White, D.W., Dill, L.M., and Crawford, C.B.: 2007, 'A Common Conceptual Framework for Behavioral Ecology and Evolutionary Psychology', *Evolutionary Psychology* 5, 275-288.